

REMARKS

Reconsideration and allowance of the application are respectfully requested. Claims 1-8 are pending and stand rejected. Applicant herein amends claims 17 and 18.

Applicant herein amends the drawings to provide formal drawings to replace the informal drawings previously submitted.

Applicant herein amends the specification to reflect renumbering of Fig. 6 as Figs. 6A through 6D, and to correct a typographic error. No new matter has been added.

Applicant herein amends claim 17 to correct the informality noted in the Office Action.

The Office Action objected to the declaration, but did not provide the reason for this objection. The undersigned has reviewed the declaration, but is still uncertain as to the reason for the objection. Accordingly, Applicant requests that the Examiner advise the undersigned by telephone (or in the next Office Action) of the basis for the objection so that corrective measures (if needed) can be taken.

The Office Action rejected claim 1 under 35 U.S.C. § 103 based on the combination of U.S. Patent 5,852,805 (Hiratsuka et al.) and U.S. Patent 6,453,282 (Hilpert et al.). Applicant respectfully traverses. Even if these references were properly combinable, these references fail to teach all features of claim 1. In particular, claim 1 recites detecting a first beat and a subsequent plurality of beats in an audio bit stream. The Office Action correctly concedes that Hiratsuka lacks this feature, but asserts that the feature is supplied by Hilpert. However, Hilpert does not teach detection of beats. Instead, Hilpert teaches detection of "transients," also called "attacks."

Beats are not the same as transients. As made clear in the written description of the present application, and as understood in the art, a "beat" is a series of perceived pulses dividing a musical signal into intervals of approximately the same duration. Conversely, a "transient" is a non-periodic sound waveform. "Attack transients" occur near the onset of sounds of musical instruments, percussive sounds or speech consonants. Unlike a beat, which is a repeating pattern, attack transients can occur at random times (e.g., whenever a note is initially struck, whenever a word with a consonant is spoken, etc.). In fact, Hilpert even discusses minimizing the effect of beats on rise detection. See col. 9, lines 32-36.

Moreover, claim 1 further recites defining a first inter-beat interval extending between a first beat and a $(k+1)^{\text{th}}$ subsequent beat. Even if a transient was the same as a beat, Hilpert does not describe or suggest defining (or even determining) a time between transients. The portion of Hilpert cited by the Office Action says nothing about time between transients, and instead refers to the time resolution of the human ear (i.e., that a pre-echo at a certain time interval is more perceptible at higher frequency). A pre-echo is not a time between transients, but is instead the distribution of quantization noise before the maximum of a signal envelope curve.

Because neither Hiratsuka nor Hilpert discloses or suggests features of claim 1, claim 1 is allowable over these references. Claims 2-8 depend from claim 1, and are therefore allowable for at least the same reasons. As to claim 3, Hiratsuka does not teach beat detection, and the portion of Hiratsuka cited by the Office Action is silent as to a packet positioned on a beat. As to claim 5, Hilpert also fails to teach beat detection, and thus fails to teach detecting a first beat utilizing a window-switching pattern.

The Office Action rejected claim 8 under 35 U.S.C. § 103 based on Hiratsuka in combination with U.S. Patent 6,199,039 (Chen et al.). Because claim 8 depends from claim 1, Applicant believes that it was intended for the rejection to be based on Hiratsuka and Hilpert in combination with Chen. In any event, Chen also fails to teach detecting a first beat and a subsequent plurality of beats in an audio bit stream or defining an inter-beat interval, and claim 8 is thus allowable.

The Office Action also rejects independent claim 9 based on Hiratsuka combined with Hilpert. Because claim 9 recites detecting at least two beats extracted from a bitstream, the beats extracted from a signal having repetitive sequences, and determining an inter-beat interval between the at least two beats, claim 9 is allowable over Hiratsuka and Hilpert for the same reasons as claim 1. Claims 10-17 depend from claim 9 and are allowable for at least the same reasons.

The Office Action rejected claim 18 based on Hiratsuka and Hilpert in further combination with U.S. Patent 6,064,954 (Cohen et al.). Claim 18 is amended herein to recite means for detecting musical beats and determining intervals between said beats. As set forth above, neither Hiratsuka nor Hilpert teaches such features. Because Cohen similarly lacks such a teaching, claim 18 is also allowable.

Finally, Applicant respectfully traverses the combination of the applied references in the Office action. The Office Action has not provided a motivation to combine Hiratsuka and Hilpert, or to combine Hiratsuka and Hilpert with either Cohen or Chen. Indeed, differences between Hiratsuka and Hilpert argue against combination. Hiratsuka addresses detecting and

concealing errors in a bit stream caused by, e.g., transmission errors. However, Hilpert deals with a different problem. Hilpert looks for attack transients. Attack transients are not transmission errors, and are instead a normal feature of various sounds. Hilpert detects those features so as to modify how audio is coded. In other words, Hilpert aims to prevent errors (e.g., pre-echoes), not hide errors.

It is respectfully submitted that this application is now in condition for allowance. Should the Examiner believe that anything further is desirable in order to place the application in even better form for allowance, he is respectfully urged to contact Applicant's undersigned representative at the below-listed number.

Respectfully Submitted,

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